

REMARKS

Claims 1-19 are pending in the application. Claims 15-19 are allowed. Claims 1-14 stand rejected. Claims 1-6 have been canceled without prejudice or a disclaimer. Claims 7 and 15 are independent claims.

Applicant wishes to thank the Examiner for allowing claims 15-19.

Claim 7 stands rejected under 35 U.S.C. ' 102(b), as allegedly being anticipated by Ono *et al.* (U.S. 6,097,525) ("Ono"). Claim 7 recites an optical transmission apparatus comprising, *inter alia*, "**a polarization-shaped modulator that polarization-modulates the signal modulated optical intensity.**"

As noted in the specification, the polarization-shaped modulator **polarization modulates** the input optical signal in accordance to the encoded electrical signal such that the components of the output signal have orthogonality (page 9, line 21 – page 10, line 7; see also Figure 4(d)).

According to the United States Court of Appeals for the Federal Circuit, a claim is anticipated only if a single prior art reference sets forth, either expressly or inherently, **each and every features** in the claim (*Verdegaal Bros. v. Union Oil Co. of CA*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); see also MPEP 2131), including those in **functional language** ((*In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ.2d 1429 (Fed. Cir. 1997) (holding that the patent applicant is free to recite features of an apparatus claim in functional language as long as such features are not inherent to the prior art)).

In the present case, the Office Action indicates that all features of claim 7 are set forth in Ono, and Ono, therefore, anticipates claim 7 (present Office Action, page 3).

Ono, however, does not disclose a **polarization-shaped modulator** that polarization-modulates the signal modulated optical intensity, as recited in claim 7. Instead, Ono disclose an

optical **phase modulator** 3 that simply modulates the phase of the optical signal into π or 0 according to the value 1 or 0 of an input electrical signal (column 7, line 8-11; see also Figure 10D of Ono (showing a signal with components that do not have orthogonality as does the signal shown in Figure 4d of the present application)).

Therefore, the phase modulator disclosed in Ono is different from the polarization-shaped modulator recited in claim 7. By teaching the phase modulator, Ono does not teach the **“polarization-shaped modulator that polarization-modulates the signal modulated optical intensity,”** as recited in claim 7. Ono, therefore, fails to anticipate claim 7.

Applicant traverses the anticipation rejection on an additional ground. In particular, claim 7, as written, recites, an optical transmission apparatus comprising, *inter alia*, **“a duobinary filter that converts the encoded 2-level electric signal into a 3-level electric signal.”**

However, nowhere in Ono is there a disclosure of such duobinary filter. Therefore, Ono fails to set forth **“a duobinary filter that converts the encoded 2-level electric signal into a 3-level electric signal,”** as recited in claim 7, and in the process, fails to anticipate claim 7.

For all foregoing reasons applicant respectfully submits that Ono does not anticipate claim 7, and applicant respectfully requests withdrawal of the anticipation rejection on claim 7.


Other dependent claims in this application are each dependent on the independent claim 7 and believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

Amendment
Serial No. 10/719,502

Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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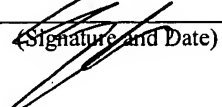
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